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A[ ]ATION OF LANDSAT-2 DATA TO THE IMPLEMENTATION AND ENFORCEMENT OF
T[ ]NNSYLVANIA SURFACE MINING CONSERVATION AND RECLAMATION ACT

7.7-10.134

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Principal Investigator:

ORVILLE R. RUSSELL
EARTH SATELLITE CORPORATION
7222 47th STREET
WASHINGTON, D.C.   20015

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FOR PERIOD DECEMBER 19, 1976 - MARCH 19, 1977

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GODDARD SPACE FLIGHT CENTER
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16. Abstract

A VARIETY OF COMPUTER-ENHANCED, COLOR-COMPOSITE, LANDSAT IMAGERY AND MINED LAND CLASSIFICATION OVERLAYS OF THE TEST SITE WAS PRESENTED TO THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION AND REGULATION FOR EVALUATION. THEY WERE UNABLE TO IDENTIFY A MEANS OF USING ANY OF THE DATA IN THEIR SURFACE MINING REGULATORY OPERATIONS.

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APPLICATION OF LANDSAT-2 DATA TO THE IMPLEMENTATION

AND ENFORCEMENT OF THE PENNSYLVANIA

SURFACE MINING CONSERVATION AND RECLAMATION ACT

TYPE II - Progress Report

For Period December 19, 1976 - March 19, 1977

Introduction to Project Objectives

The central objectives of the Pennsylvania LANDSAT Investigation
are:

- To prepare information products from analysis of LANDSAT and
  aircraft imagery to rapidly and effectively implement the
  regulatory provisions of Pennyslvania's Surface Mining Con-
  servation and Reclamation Act.

- To develop and operationally implement a monitoring system,
  within one or more detailed study sites, which will include
  surface mine disturbance change detection, reclamation status
  monitoring and mined lands inventory updating.

- To provide utilitarian regulatory information products to line
  agencies within the Pennsylvania Department of Environmental
  Resources.

Accomplishments

In February a meeting coordinated by the Pennsylvanian Office of Planning and Research was held at Harrisburg with various bureaus of the Department of Environmental Protection and Regulation. Both the Bureau of Surface Mine Reclamation and the Bureau of Water Quality Management were well represented at the meetings.

A variety of computer processed LANDSAT image products were presented for consideration and evaluation. The LANDSAT imagery includes black-and-white and color enlargements at scales of 1:125,000, 1:63,360 and 1:24,000; some with interpretation overlays in map form. These products demonstrated the degree of utility of LANDSAT data and manual interpretation for monitoring mining progress and status of reclamation. Points covered in a presentation were:

- Anticipated frequency of acquisition of usable imagery.
- Imagery scale requirements.
- Types of LANDSAT imagery processing.
- Type of information derivable from LANDSAT imagery.
- Type of information derivable from aircraft photography.
- Possible utility to the state.
- Cost of imagery processing.
- Cost of manual analysis.

The results of the meeting were largely negative. The state was unable to identify a use for LANDSAT imagery in their day-to-day enforcement of their mining laws (a factor with which I agree). The only application visualized for LANDSAT imagery on an annual basis was to provide a possible means of verifying the reports of the field inspectors. This, however, was not deemed a high priority need.

Major criticism for the use of LANDSAT data were:

- Lack of timely receipt of LANDSAT data.

- Cost of imagery processing.

- Lack of qualified analysts.

- Cost of imagery analysis.

The final report draft is in preparation and will be submitted in the next reporting period.

Significant Results

None.

Publications

None.

Recommendations

None.